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DEPARTMENT OF AGRICULTURE,  
BUREAU OF CHEMISTRY.

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Analysis of Paris Green,  
1910.

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*Chief Chemist.*



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## BUREAU OF CHEMISTRY.

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## LETTER OF TRANSMITTAL.

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DEPARTMENT OF AGRICULTURE.  
BUREAU OF CHEMISTRY.

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Harrisburg, Pa., January 27, 1911.

Hon. N. B. Critchfield,  
Secretary of Agriculture,  
Harrisburg, Pa.

Dear Sir:—I have the honor to transmit herewith a report of the results obtained in the chemical examination of samples of Paris green secured in the open markets of Pennsylvania, during the year 1910. In addition to the tabulated results of analyses such information is included in this report as was considered to be of importance.

Very respectfully,

JAMES W. KELLOGG,  
Chief Chemist.





# ANALYSIS OF PARIS GREEN

## 1910.

By JAMES W. KELLOGG.\*

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### INTRODUCTION.

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This bulletin is a report of the work accomplished by the Bureau of Chemistry of the Pennsylvania Department of Agriculture, in the analysis and examination of Paris green sold in the State during the year 1910, in accordance with the provisions of an act approved May 29th, 1907, regulating the sale of Paris green. This act requires that Paris green shall contain not less than fifty per centum of arsenic in combination with copper, and not more than three and one-half per centum of arsenic in water soluble forms, both forms estimated as arsenious oxide.

During the year a special agent of the Department secured four hundred and seventeen samples of Paris green from dealers located throughout Pennsylvania. All these samples have been analyzed, and the results obtained are given in the accompanying table. The packages containing the samples were examined as to their labelling and guarantees, and a report made in each case by the agent.

Quite a number of cases were reported where the proper guarantees and labels were not affixed to the packages containing the green. There were not as many violations of this nature as were found during the previous year. The failure to properly label these goods was probably due more to negligence and ignorance of the law than to any intent at wilful violations. In all cases where the manufacturers were notified, a ready willingness was shown to comply with the law, and labels were sent to dealers with a request to place them on packages which were not properly labeled. Only two samples out of the number not guaranteed, were found, which did not meet the required amount of arsenious oxide combined with copper. The majority of the remaining samples, not guaranteed, ran considerably over the required amount. No samples were found to contain water soluble arsenious oxide in excess of three and one-half per centum.

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\*Acknowledgment is due to Dr. Franklin Menges, Special Assistant Chemist, who performed the analytical work herein reported, and also to Mr. John S. Spicer, First Assistant Chemist, for assistance in preparing reports.

One sample was received in which no arsenic or copper were detected, and this sample was found to resemble Paris green in color and to be composed of barium sulphate, calcium sulphate, lead chromate and Prussian blue.

It developed that the sample was "Permanent Green," a paint pigment which had been sold by mistake as Paris Green.

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## COMPARISON OF SAMPLES BY MIXING WITH WATER AND SIEVING.

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All samples received during the year were examined as to their fineness and as to whether or not they were finely ground or mixed well with water. As nearly as possible these were divided into three classes as follows: Those which were finely ground and mixed well with water, those which were not finely ground and which mixed fairly well with water and those which did not mix well with water.

Of the total number examined in this manner, 150 were found which were finely ground and mixed well with water. Of this number 108 were sifted through a No. 100 mesh sieve and in 16 cases nearly all of the sample passed through the sieve. After so treating the remaining 92 samples, the amount remaining on the sieve varied from 2 per cent. to 15 per cent.

The samples which were found to mix fairly well with water and which were not in as finely a ground condition as those in the first class, numbered 98. Of this number, 42 were sieved and the amount of sample not passing through the No. 100 mesh sieve ranged from 10 per cent. to 20 per cent.

The samples received which did not mix well with water numbered 168. Of these, 90 were sieved and from 5 per cent. to 20 per cent. in each case remained on the sieve, 16 were lumpy and in each case a large proportion of this grade did not pass a No. 60 mesh sieve.

Of the total number compared by means of the No. 100 mesh sieve, regardless of their capacity to mix well with water, the following was observed: In 16 cases nearly all of the sample passed through the sieve; in 6 cases 2 per cent. remained on the sieve; in 37, 3 per cent.; in 36, 5 per cent.; in 7, 8 per cent.; in 54, 10 per cent.; in 20, 15 per cent.; in 6, 18 per cent., and in 42 samples, 20 per cent. did not pass the No. 100 mesh sieve. These results are of interest, as they show the degree of fineness to which the majority of samples were ground and also that a large proportion of the Paris green represented by the samples collected by the Bureau were not as finely ground and did not mix as well with water as they should. In the cases where the samples were lumpy, a large proportion of which would not pass the finest sieve, it will be readily seen that Paris green of this nature would not work properly in the spraying apparatus, and therefore, the full benefit of the green purchased would not be secured.

## DISCUSSION OF THE RESULTS OF CHEMICAL ANALYSIS.

## ARSENIC IN COMBINATION WITH COPPER, CALCULATED AS ARSENIOUS OXIDE.

The Pennsylvania Paris green law requires that Paris green sold in this State shall contain fifty per cent. of arsenic in combination with copper. In the four hundred and sixteen samples of green analyzed, the arsenious oxide in combination with copper was found to vary from 49.47 per cent. to 57.68 per cent., with an average of 55.10 per cent. Only two samples were found to contain less than the required amount of this form of arsenic.

## WATER SOLUBLE ARSENIOUS OXIDE.

The law prohibits the amount of arsenic in water soluble forms which may be present in Paris green, from exceeding 3.50 per cent. The amount of water soluble arsenious oxide found present in the samples analyzed varied from 0.72 per cent. to 3.45 per cent., with an average of 1.32 per cent. None of the green examined was found to contain water soluble arsenic in excess of the amount restricted by law.

## TOTAL ARSENIOUS OXIDE.

The results obtained in determining the total content of arsenious oxide showed the lowest percentage to be 51.60, the highest percentage to be 61.20, with an average of 56.61 per cent.

## COPPER OXIDE.

The amount of copper, expressed as copper oxide, which was determined in the samples received, was found to range from 26.75 per cent. to 30.93 per cent., with an average of 29.55 per cent.

The results obtained by analysis of each sample, together with the Chemist's and Agent's numbers and the names and addresses of the manufacturers and dealers will be found in the following table.

The samples are grouped according to the names of the manufacturers or importers and the names of the manufacturers or importers, and the names of the dealers from whom the samples were obtained, under the name of each manufacturer or importer, are placed in the table in alphabetical order.

TABLE I.—ANALYSIS OF SAMPLES OF

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1007	Adler Color and Chemical Works, New York, N. Y.	Mount Pleasant, H. F. Barkley, .....
P. 1133	Adler Color and Chemical Works, New York, N. Y.	Bradford, Blair & Co., .....
P. 1029	Adler Color and Chemical Works, New York, N. Y.	Apollo, Chas. W. Bollinger, .....
P. 992	Adler Color and Chemical Works, New York, N. Y.	Greensburg, S. P. Brown, .....
P. 1061	Adler Color and Chemical Works, New York, N. Y.	Punxsutawney, Geo. G. Burkett, .....
P. 974	Adler Color and Chemical Works, New York, N. Y.	Clarion, A. G. Corbett, .....
P. 982	Adler Color and Chemical Works, New York, N. Y.	Greenville, Davis & Alexander, .....
P. 999	Adler Color and Chemical Works, New York, N. Y.	Irwin, Geo. W. Fink, .....
P. 1018	Adler Color and Chemical Works, New York, N. Y.	Indiana, Tom E. Hildebrand, .....
P. 1003	Adler Color and Chemical Works, New York, N. Y.	Jeannette, R. F. Hugus, .....
P. 1254	Adler Color and Chemical Works, New York, N. Y.	Manheim, W. Litzenberger, .....
P. 944	Adler Color and Chemical Works, New York, N. Y.	Columbia, Dr. C. F. Markel, .....
P. 984	Adler Color and Chemical Works, New York, N. Y.	Greenville, Roy McCartaney, .....
P. 1317	Adler Color and Chemical Works, New York, N. Y.	New Kensington, McCullough Drug Co., .....
P. 1303	Adler Color and Chemical Works, New York, N. Y.	Brookville, McKight Son & Co., .....
P. 902	Adler Color and Chemical Works, New York, N. Y.	York Haven, H. O. Meads Co., .....
P. 920	Adler Color and Chemical Works, New York, N. Y.	Dallastown, G. A. Myers, .....
P. 1315	Adler Color and Chemical Works, New York, N. Y.	New Kensington, D. A. Reeser, .....
P. 1076	Adler Color and Chemical Works, New York, N. Y.	Franklin, Martin W. Reisenman, .....
P. 1055	Adler Color and Chemical Works, New York, N. Y.	Ford City, E. J. Rihn, .....
P. 1021	Adler Color and Chemical Works, New York, N. Y.	Blairsville, O. A. Schrock, .....
P. 1058	Adler Color and Chemical Works, New York, N. Y.	DuBois, Chas. A. Schrum, .....
P. 981	Adler Color and Chemical Works, New York, N. Y.	Greenville, Shrom & Co., .....
P. 919	Adler Color and Chemical Works, New York, N. Y.	Dallastown, V. M. Simon, .....
P. 908	Adler Color and Chemical Works, New York, N. Y.	Dover, Amos Swartz, .....
P. 1135	Adler Color and Chemical Works, New York, N. Y.	Bradford, Thompson & Wood, .....
P. 1279	Adler Color and Chemical Works, New York, N. Y.	Gap, I. Lewis Walker, .....
P. 1309	Adler Color and Chemical Works, New York, N. Y.	Mars, Chas. E. Willets, .....
P. 1027	Adler Color and Chemical Works, New York, N. Y.	Apollo, Frank T. Wray, .....
P. 968	Adler Color and Chemical Works, New York, N. Y.	Butler, Wuller Pharmacy, .....
		Average, .....
P. 938	American Druggist Syndicate, Long Island City, N. Y.	Columbia, Shroder & Hinkle, .....
P. 1095	A. B. Ansbacher & Co., New York, N. Y.	Corry, C. O. Babbitt & Son, .....

## PARIS GREEN COLLECTED IN 1910.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct. 56.00	Per ct. 50.00	Per ct. 0.72	Per ct. 3.50	Per ct. 56.83	Per ct. 30.03	Cts. 40	
41								P. 1007
167	55.59	-----	1.56	-----	57.18	29.81	40	P. 1133
63	55.59	50.00	1.00	3.50	56.59	29.81	40	P. 1029
26	55.59	50.00	1.00	3.50	56.62	29.81	50	P. 992
95	55.82	50.00	1.00	3.50	56.88	29.93	50	P. 1061
8	56.00	50.00	1.00	3.50	57.11	30.03	40	P. 974
16	55.40	50.00	1.48	3.50	57.05	29.71	40	P. 982
33	56.00	50.00	0.72	3.50	56.62	30.03	40	P. 999
52	55.81	50.00	1.00	3.50	56.85	29.93	40	P. 1018
37	55.59	50.00	1.00	3.50	56.65	29.81	40	P. 1003
288	55.12	50.00	1.00	3.50	56.12	29.56	28	P. 1254
44	55.70	50.00	1.00	3.50	56.40	29.87	35	P. 944
18	55.48	50.00	1.00	3.50	56.43	29.75	40	P. 984
351	54.88	55.00	1.20	3.50	56.11	29.43	50	P. 1317
337	54.08	-----	1.71	-----	56.05	29.00	35	P. 1303
2	53.95	50.00	1.82	3.50	55.57	28.93	30	P. 902
20	55.95	50.00	1.00	3.50	57.00	30.00	40	P. 920
349	55.59	50.00	1.00	3.50	56.55	29.81	40	P. 1315
110	55.24	50.00	1.00	3.50	56.40	29.62	35	P. 1076
99	53.78	50.00	2.45	3.50	56.58	28.84	45	P. 1065
55	55.95	50.00	1.00	3.50	56.77	30.00	50	P. 1021
92	55.35	50.00	1.59	3.50	57.00	29.68	40	P. 1058
15	55.07	50.00	1.10	3.50	56.37	29.53	40	P. 981
19	55.76	50.00	1.00	3.50	56.81	29.90	30	P. 919
8	55.70	-----	1.00	-----	56.81	29.87	30	P. 908
169	54.08	-----	2.00	-----	56.25	29.00	35	P. 1135
313	53.84	50.00	1.98	3.50	55.86	28.87	30	P. 1279
343	54.08	55.00	1.34	3.50	55.61	29.00	40	P. 1309
61	55.95	50.00	1.00	3.50	56.96	30.00	50	P. 1027
2	55.53	50.00	1.00	3.50	56.43	29.78	40	P. 968
-----	55.28	-----	1.22	-----	56.55	29.64	39	-----
38	52.74	-----	2.96	-----	56.55	28.28	85	P. 938
129	55.95	55.00	1.00	3.50	57.00	30.00	50	P. 1095



TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1300	A. B. Ansbacher & Co., New York, N. Y.	Leacock, Geo. Bard, .....
P. 1141	A. B. Ansbacher & Co., New York, N. Y.	Port Allegany, Bard & Cheney, .....
P. 1190	A. B. Ansbacher & Co., New York, N. Y.	Kutztown, W. B. Bieber, .....
P. 1120	A. B. Ansbacher & Co., New York, N. Y.	Johnsonburg, Harry E. Bosler, .....
P. 1073	A. B. Ansbacher & Co., New York, N. Y.	Franklin, R. H. Callan, .....
P. 1137	A. B. Ansbacher & Co., New York, N. Y.	Bradford, W. B. Callender, .....
P. 1278	A. B. Ansbacher & Co., New York, N. Y.	Christiana, Christiana Hardware and Supply Co., .....
P. 1130	A. B. Ansbacher & Co., New York, N. Y.	Warren, City Drug Store, .....
P. 1140	A. B. Ansbacher & Co., New York, N. Y.	Port Allegany, Gallup Hardware Co., .....
P. 1235	A. B. Ansbacher & Co., New York, N. Y.	Everett, H. F. Gump & Sons, .....
P. 1259	A. B. Ansbacher & Co., New York, N. Y.	Lititz, C. H. Kreider, .....
P. 1082	A. B. Ansbacher & Co., New York and Chicago.	Cambridge Springs, Lord & Drake, .....
P. 1257	A. B. Ansbacher & Co., New York and Chicago.	Manheim, H. H. Martin, .....
P. 1285	A. B. Ansbacher & Co., New York and Chicago.	Mount Joy, G. Moyer, .....
P. 1128	A. B. Ansbacher & Co., New York and Chicago.	Warren, J. B. Mullen, .....
P. 1022	A. B. Ansbacher & Co., New York and Chicago.	Blairsville, Geo. J. New, .....
P. 1026	A. B. Ansbacher & Co., New York and Chicago.	Apollo, W. F. Pauly, .....
P. 1132	A. B. Ansbacher & Co., New York and Chicago.	Warren, The Reynolds Drug Co., .....
P. 1241	A. B. Ansbacher & Co., New York and Chicago.	Elizabethtown, Jos. H. Rider & Son, .....
P. 1281	A. B. Ansbacher & Co., New York and Chicago.	Gap, Geo. T. Sellers, .....
P. 1147	A. B. Ansbacher & Co., New York and Chicago.	Lewistown, G. W. Sheary, .....
P. 1270	A. B. Ansbacher & Co., New York and Chicago.	New Holland, J. W. Shoowalter, .....
P. 1260	A. B. Ansbacher & Co., New York and Chicago.	New Holland, Wm. M. Stauffer, .....
P. 1122	A. B. Ansbacher & Co., New York and Chicago.	Kane, Temple Pharmacy, .....
P. 1265	A. B. Ansbacher & Co., New York and Chicago.	Ephrata, S. L. Weaver, .....
		Average, .....
P. 1043	Ashenbuck & Miller, Philadelphia, Pa.,	Huntingdon, Wm. M. Calvert, .....
P. 1301	E. J. Barry, New York, N. Y.,	Leacock, Geo. Bard, .....
P. 904	E. J. Barry, New York, N. Y.,	Manchester, S. S. Bare, .....
P. 1151	E. J. Barry, New York, N. Y.,	Palmyra, Geo. M. Baldwin, .....
P. 951	E. J. Barry, New York, N. Y.,	Stewartstown, A. M. Bartenslager, .....
P. 927	E. J. Barry, New York, N. Y.,	Wrightsville, Bernstock Bros., .....
P. 1230	E. J. Barry, New York, N. Y.,	Everett, Claycomb & Whetstone, .....
P. 931	E. J. Barry, New York, N. Y.,	Hellam, L. R. Crumling, .....
P. 1231	E. J. Barry, New York, N. Y.,	Bedford, John R. Dull, .....
P. 914	E. J. Barry, New York, N. Y.,	Shrewsbury, Dr. C. H. Gerry, .....
P. 949	E. J. Barry, New York, N. Y.,	Broguenville, Grove & Uffelman, .....
P. 954	E. J. Barry, New York, N. Y.,	Park, Grove & Uffelman, .....
P. 1253	E. J. Barry, New York, N. Y.,	Manheim, W. Litzenger, .....
P. 921	E. J. Barry, New York, N. Y.,	Dallastown, G. J. McDowell, .....

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Cts.	
334	55.01	55.00	0.98	3.50	55.99	29.50	25	P. 1300
175	55.70	55.00	1.00	3.50	56.68	29.87	40	P. 1141
224	55.82	53.00	1.00	3.50	56.99	29.93	25	P. 1190
154	55.70	55.00	1.44	3.50	58.00	29.87	40	P. 1120
107	56.24	50.00	1.00	3.50	56.94	30.15	50	P. 1073
171	55.95	-----	1.00	-----	56.87	30.00	40	P. 1137
312	55.82	55.00	1.20	3.50	57.82	29.93	25	P. 1278
164	55.35	-----	1.00	-----	56.25	29.68	40	P. 1130
174	55.59	55.00	1.20	3.50	56.37	29.81	35	P. 1140
269	55.24	55.00	1.00	3.50	56.22	29.62	40	P. 1235
293	55.59	55.00	1.00	3.50	56.81	29.81	30	P. 1259
116	57.11	55.00	1.00	3.50	57.00	30.62	30	P. 1082
291	55.35	55.00	1.00	3.50	56.35	29.68	30	P. 1257
319	55.59	55.00	1.00	3.50	56.35	29.81	30	P. 1285
162	55.95	-----	1.20	-----	56.56	30.00	40	P. 1123
56	56.24	55.00	1.00	3.50	56.65	30.15	40	P. 1022
60	56.34	55.00	0.85	3.50	57.08	30.21	40	P. 1026
166	55.95	-----	1.00	-----	56.93	30.00	40	P. 1132
275	55.95	55.00	1.34	3.50	57.37	30.00	30	P. 1241
315	55.24	55.00	1.00	3.50	56.23	29.62	28	P. 1231
181	56.17	55.00	1.00	3.50	56.68	30.12	32	P. 1147
304	56.52	55.00	0.98	3.50	57.25	30.31	30	P. 1270
303	55.35	55.00	1.00	3.50	56.28	29.68	30	P. 1269
156	54.77	-----	1.32	-----	56.87	29.37	35	P. 1122
299	53.95	55.00	1.71	3.50	56.16	28.93	35	P. 1265
-----	55.71	-----	1.09	-----	56.76	29.87	35	-----
77	55.35	-----	1.00	-----	56.47	29.68	40	P. 1043
335	54.88	-----	1.00	-----	56.11	29.43	25	P. 1301
4	55.35	50.00	1.00	3.50	56.29	29.68	35	P. 904
185	54.79	50.00	1.37	3.50	56.25	29.06	35	P. 1151
51	55.48	-----	1.00	-----	56.81	29.75	-----	P. 951
27	55.40	-----	1.00	-----	56.48	29.71	30	P. 927
270	55.12	50.00	1.00	3.50	56.10	29.56	40	P. 1236
31	55.18	50.00	1.00	3.50	56.26	29.59	35	P. 931
265	54.19	50.00	1.47	3.50	55.73	29.00	40	P. 1231
14	54.88	50.00	1.00	3.50	55.96	29.43	35	P. 914
49	54.55	-----	1.43	-----	56.48	29.25	35	P. 949
54	54.71	50.00	1.30	3.50	56.16	29.34	30	P. 954
287	54.95	-----	1.00	-----	56.04	29.46	28	P. 1253
21	54.77	50.00	1.00	8.50	55.95	29.37	40	P. 921

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1131	E. J. Barry, New York, N. Y., -----	Warren, The Reynolds Drug Co., -----
P. 1115	E. J. Barry, New York, N. Y., -----	Ridgway, Ross Drug Co., -----
P. 937	E. J. Barry, New York, N. Y., -----	Cly, Cly Shelly, -----
P. 1248	E. J. Barry, New York, N. Y., -----	Lancaster, Sprecher & Gauss, -----
P. 1210	E. J. Barry, New York, N. Y., -----	Pottsville, L. C. Thompson, -----
P. 926	E. J. Barry, New York, N. Y., -----	Wrightsville, G. S. Linsley, -----
P. 953	E. J. Barry, New York, N. Y., -----	Broguenville, F. C. Uffelman, -----
P. 905	E. J. Barry, New York, N. Y., -----	Mt. Wolf, G. H. Wolf's Sons, -----
		Average, -----
P. 1158	Lewis Berger & Sons, Ltd., London, England, -----	Lebanon, C. E. Boger, -----
P. 1268	Lewis Berger & Sons, Ltd., London, England, -----	New Holland, Diller Hardware Co., -----
P. 1273	Lewis Berger & Sons, Ltd., London, England, -----	New Holland, A. B. Groff, -----
P. 1159	Lewis Berger & Sons, Ltd., London, England, -----	Lebanon, Lemberger & Co., -----
P. 1294	Lewis Berger & Sons, Ltd., London, England, -----	Terre Hill, Marks & Moyer, -----
P. 1290	Lewis Berger & Sons, Ltd., London, England, -----	Strasburg, J. J. Messner, -----
P. 1247	Lewis Berger & Sons, Ltd., London, England, -----	Lancaster, Reilly Bros. & Raub, -----
P. 1298	Lewis Berger & Sons, Ltd., London, England, -----	Terre Hill, S. S. Watts, -----
		Average, -----
P. 1237	The Jas. A. Blanchard Co., New York, N. Y., -----	Everett, W. A. Alexander, -----
P. 1016	The Jas. A. Blanchard Co., New York, N. Y., -----	Indiana, Elmer W. Allison, -----
P. 1170	The Jas. A. Blanchard Co., New York, N. Y., -----	Reading, American Medicine Co., -----
P. 1163	The Jas. A. Blanchard Co., New York, N. Y., -----	Lebanon, Frank H. Atkins, -----
P. 952	The Jas. A. Blanchard Co., New York, N. Y., -----	Stewartstown, A. M. Bartenslager, -----
P. 928	The Jas. A. Blanchard Co., New York, N. Y., -----	Wrightsville, Bernstock Bros., -----
P. 1057	The Jas. A. Blanchard Co., New York, N. Y., -----	Du Bois, C. J. Boyle, -----
P. 1046	The Jas. A. Blanchard Co., New York, N. Y., -----	Philipsburg, W. B. Brown, -----
P. 943	The Jas. A. Blanchard Co., New York, N. Y., -----	Columbia, W. L. Bucher, -----
P. 1244	The Jas. A. Blanchard Co., New York, N. Y., -----	Elizabethtown, A. W. Cain, -----
P. 1216	The Jas. A. Blanchard Co., New York, N. Y., -----	Minersville, J. W. Clemmens, -----
P. 1117	The Jas. A. Blanchard Co., New York, N. Y., -----	Ridgway, Albert Cliffe, -----
P. 959	The Jas. A. Blanchard Co., New York, N. Y., -----	Concordville, Concordville Supply Co., -----
P. 1267	The Jas. A. Blanchard Co., New York, N. Y., -----	Ephrata, H. L. Cox, -----
P. 906	The Jas. A. Blanchard Co., New York, N. Y., -----	Mt. Wolf, C. W. Cretchman, -----
P. 1276	The Jas. A. Blanchard Co., New York, N. Y., -----	Atglen, H. C. Davis, -----
P. 1051	The Jas. A. Blanchard Co., New York, N. Y., -----	Clearfield, C. W. Dooley & Co., -----
P. 1106	The Jas. A. Blanchard Co., New York, N. Y., -----	Lock Haven, Richard L. Fishburne, -----



## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Ots.	
165	55.59	50.00	1.00	3.50	56.68	29.81	40	P. 1131
149	54.19	50.00	1.32	3.50	56.56	29.06	40	P. 1115
37	53.95	50.00	1.43	3.50	55.90	23.93	30	P. 937
232	55.01	50.00	1.34	3.50	56.68	29.50	25	P. 1248
244	54.08	-----	1.47	-----	55.86	29.00	30	P. 1210
26	54.36	50.00	1.00	3.50	55.77	29.15	30	P. 926
53	55.18	-----	1.00	-----	56.49	29.59	-----	P. 953
5	54.77	50.00	1.30	3.50	55.44	29.37	35	P. 905
-----	54.83	-----	1.16	-----	56.19	29.39	34	-----
192	53.84	-----	1.20	-----	55.26	28.87	36	P. 1158
302	54.66	-----	1.34	-----	56.22	29.31	30	P. 1268
307	55.48	-----	1.71	-----	57.12	29.75	30	P. 1273
193	54.77	-----	1.75	-----	56.68	29.37	36	P. 1159
328	54.66	-----	1.20	-----	56.05	29.31	30	P. 1294
324	55.48	-----	1.00	-----	56.35	29.75	25	P. 1290
281	55.24	-----	1.20	-----	56.56	29.62	35	P. 1247
332	55.59	-----	1.00	-----	56.35	29.81	30	P. 1298
-----	54.97	-----	1.30	-----	56.32	29.47	32	-----
271	53.95	50.00	2.20	3.00	56.61	28.93	40	P. 1237
50	51.86	-----	2.81	-----	56.96	27.81	35	P. 1016
204	54.77	50.00	1.00	3.00	55.75	29.37	25	P. 1170
197	53.84	50.00	1.87	3.00	56.37	28.87	30	P. 1163
52	53.73	-----	1.82	-----	55.77	28.81	30	P. 952
28	54.60	-----	1.00	-----	55.90	29.28	30	P. 923
91	56.17	53.50	1.00	2.50	56.88	30.12	40	P. 1057
80	54.42	53.50	2.21	2.50	56.84	29.18	30	P. 1046
43	54.01	53.50	1.43	2.50	55.96	28.96	35	P. 943
278	54.88	50.00	1.59	3.00	56.50	29.43	30	P. 1244
250	54.19	50.00	1.20	3.50	55.55	29.06	35	P. 1216
151	55.12	53.50	1.80	2.50	57.18	29.56	35	P. 1117
59	54.60	-----	1.43	-----	56.37	29.28	35	P. 959
301	53.61	50.00	2.20	3.00	56.16	28.75	35	P. 1267
6	53.61	-----	1.43	-----	55.31	28.75	28	P. 906
310	54.88	50.00	1.93	3.50	56.96	29.43	24	P. 1276
85	53.67	-----	2.99	-----	57.01	28.78	50	P. 1051
140	54.94	50.00	2.50	3.50	57.50	29.46	40	P. 1106

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 965	The Jas. A. Blanchard Co., New York, N. Y.	Media, J. H. Flemming, -----
P. 1107	The Jas. A. Blanchard Co., New York, N. Y.	Renovo, H. B. Foresman, -----
P. 1040	The Jas. A. Blanchard Co., New York, N. Y.	Tyrone, G. H. Garner, -----
P. 1181	The Jas. A. Blanchard Co., New York, N. Y.	Boyertown, C. C. Graeff, -----
P. 1271	The Jas. A. Blanchard Co., New York, N. Y.	New Holland, A. B. Groff, -----
P. 1146	The Jas. A. Blanchard Co., New York, N. Y.	Lewistown, P. M. Headings, -----
P. 1055	The Jas. A. Blanchard Co., New York, N. Y.	DuBois, A. P. Holland, -----
P. 1251	The Jas. A. Blanchard Co., New York, N. Y.	Lancaster, Geo. W. Hull, -----
P. 1050	The Jas. A. Blanchard Co., New York, N. Y.	Clearfield, Irwin Drug Co., -----
P. 1198	The Jas. A. Blanchard Co., New York, N. Y.	Womelsdorf, F. T. Landis, -----
P. 1182	The Jas. A. Blanchard Co., New York, N. Y.	Boyertown, E. & J. W. Leaver, -----
P. 1224	The Jas. A. Blanchard Co., New York, N. Y.	Altoona, J. Ross Mateer, -----
P. 1108	The Jas. A. Blanchard Co., New York, N. Y.	Renovo, T. E. Mayes, -----
P. 1302	The Jas. A. Blanchard Co., New York, N. Y.	Brookville, McKnight Son & Co., -----
P. 930	The Jas. A. Blanchard Co., New York, N. Y.	Wrightsville, M. E. Poff, -----
P. 1284	The Jas. A. Blanchard Co., New York, N. Y.	Gap, Harry A. Raun, -----
P. 1041	The Jas. A. Blanchard Co., New York, N. Y.	Huntingdon, John A. Read & Sons, -----
P. 1145	The Jas. A. Blanchard Co., New York, N. Y.	Lewistown, J. P. Rothermel, -----
P. 1186	The Jas. A. Blanchard Co., New York, N. Y.	Kutztown, N. S. Schmehl, -----
P. 956	The Jas. A. Blanchard Co., New York, N. Y.	Swarthmore, Victor D. Shirer, -----
P. 1193	The Jas. A. Blanchard Co., New York, N. Y.	Birdsboro, John W. Slipp, -----
P. 1042	The Jas. A. Blanchard Co., New York, N. Y.	Huntingdon, H. E. Steel, -----
P. 1042	The Jas. A. Blanchard Co., New York, N. Y.	St. Marys, St. Marys Drug Store, -----
P. 940	The Jas. A. Blanchard Co., New York, N. Y.	Columbia, C. R. Strickler, -----
P. 1110	The Jas. A. Blanchard Co., New York, N. Y.	Emporium, Geo. C. Taggart, -----
P. 1048	The Jas. A. Blanchard Co., New York, N. Y.	Philipsburg, G. F. Troutman & Co., -----
P. 1291	The Jas. A. Blanchard Co., New York, N. Y.	Strasburg, J. G. Weaver, -----
P. 925	The Jas. A. Blanchard Co., New York, N. Y.	Wrightsville, Harry Wood, -----
P. 1054	The Jas. A. Blanchard Co., New York, N. Y.	Clearfield, Woodward & Brenner, -----
P. 924	The Jas. A. Blanchard Co., New York, N. Y.	Dallastown, M. L. Zeigler, -----
P. 1097	The Jas. A. Blanchard Co., New York, N. Y.	Bellefonte, Zeller & Son, -----
		Average, -----
P. 1191	Bright & Co., Reading, Pa., -----	Birdsboro, F. W. Foelt & J. B. Lacy, Jr.,---

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
65	Per ct. 55.81	Per ct. -----	Per ct. 1.00	Per ct. -----	Per ct. 56.87	Per ct. 29.93	Cts. 35	P. 965
141	51.86	-----	1.44	-----	61.20	27.81	45	P. 1107
74	53.61	-----	2.72	-----	56.47	28.75	40	P. 1040
215	54.55	-----	1.00	-----	55.75	29.25	30	P. 1181
305	53.73	50.00	1.71	3.00	57.20	28.81	30	P. 1271
180	54.77	50.00	1.62	3.00	56.50	29.37	35	P. 1146
89	54.55	-----	1.59	-----	56.22	29.25	50	P. 1055
285	54.42	50.00	1.83	3.50	56.74	29.18	25	P. 1251
84	51.22	-----	2.81	-----	60.76	27.46	40	P. 1050
232	53.84	50.00	2.45	3.00	56.87	28.37	25	P. 1198
216	54.55	50.00	1.00	3.50	55.62	29.25	25	P. 1182
258	53.26	50.00	1.47	3.00	55.73	28.56	50	P. 1224
142	55.40	-----	1.63	-----	57.68	29.71	40	P. 1108
336	51.86	-----	1.71	-----	57.58	27.81	35	P. 1302
30	53.73	-----	1.30	-----	55.44	28.81	30	P. 930
318	54.08	50.00	1.71	3.00	55.92	29.00	40	P. 1284
75	55.59	50.00	1.20	3.00	56.90	29.81	40	P. 1041
179	54.55	50.00	1.62	3.00	56.43	29.25	35	P. 1145
220	54.77	53.50	1.72	2.50	56.87	29.37	21	P. 1186
56	55.95	53.00	1.00	2.50	56.37	30.00	35	P. 956
227	54.42	50.00	2.08	3.00	57.29	29.18	30	P. 1193
76	54.88	53.50	2.21	2.50	57.03	29.43	40	P. 1042
146	53.20	-----	1.56	-----	56.75	28.53	40	P. 1112
40	52.14	-----	2.66	-----	56.55	27.96	35	P. 940
144	55.53	53.50	1.44	2.50	57.48	29.78	30	P. 1110
82	55.01	-----	1.59	-----	57.14	29.50	40	P. 1048
325	54.30	50.00	1.71	3.00	56.17	29.12	25	P. 1291
25	53.67	-----	1.43	-----	55.63	28.78	40	P. 925
88	55.53	53.50	1.96	2.50	57.33	29.78	40	P. 1054
24	53.89	-----	1.30	-----	55.63	28.90	30	P. 924
131	56.22	-----	1.00	-----	57.00	30.15	40	P. 1097
-----	54.24	-----	1.71	-----	56.71	29.09	35	-----
225	55.95	-----	1.00	-----	56.87	30.00	25	P. 1191

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1239	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Elizabethtown, Geo. D. Boggs & Son, -----
P. 1197	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Womelsdorf, L. S. Filbert, -----
P. 1200	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Robesonia, Thomas Filbert, -----
P. 1201	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Robesonia, Gerhart & Moyer, -----
P. 1262	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Adamstown, S. K. Hefley, -----
P. 1202	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Wernersville, John I. Miller, -----
P. 1208	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Sinking Springs, Levi S. Miller, -----
P. 1173	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Reading, John H. Obold & Co., -----
P. 1144	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Lewistown, J. B. Selheiner, -----
P. 1156	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Annaville, John S. Shope, -----
P. 1116	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Ridgway, Smith Bros. Co., -----
P. 1260	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Adamstown, H. F. Snader & Co., -----
P. 1195	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Birdsboro, W. O. Steward, -----
P. 1264	F. W. Devoe & C. T. Raynolds Co., New York, N. Y.	Ephrata, S. L. Weaver, -----
		Average, -----
P. 1105	Felton, Sibley & Co., Philadelphia, Pa.	Lock Haven, A. C. Candor & Co., -----
P. 1228	Felton, Sibley & Co., Philadelphia, Pa.	Altoona, D. B. Dougherty & Son, -----
P. 1184	Felton, Sibley & Co., Philadelphia, Pa.	Boyertown, G. P. Rabn, -----
P. 1177	Felton, Sibley & Co., Philadelphia, Pa.	Hamburg, Walter M. Raubenhold & Son, -----
P. 1219	Felton, Sibley & Co., Philadelphia, Pa.	Minersville, The F. W. Sanner Hardware Co., -----
P. 963	Felton, Sibley & Co., Philadelphia, Pa.	Media, Henry C. Snowden, Jr., -----
		Average, -----
P. 913	Harshburg & Hollander, Baltimore, Md.	Shrewsbury, Geo. P. Everhart, -----
P. 1179	Morris Herrmann & Co., New York, N. Y.	Hamburg, J. L. Balthaser, -----
P. 950	Morris Herrmann & Co., New York, N. Y.	Stewartstown, A. W. Bartenslager, -----
P. 1044	Morris Herrmann & Co., New York, N. Y.	Huntingdon, Black & Co., -----
P. 1238	Morris Herrmann & Co., New York, N. Y.	Elizabethtown, Geo. D. Boggs & Son, -----
P. 1205	Morris Herrmann & Co., New York, N. Y.	Wernersville, D. H. Bortz, -----
P. 1209	Morris Herrmann & Co., New York, N. Y.	Pottsville, Bright & Co., -----
P. 1277	Morris Herrmann & Co., New York, N. Y.	Christiana, Christiana Hardware and Supply Co.
P. 900	Morris Herrmann & Co., New York, N. Y.	Concordville, Cloud & Green, -----
P. 1255	Morris Herrmann & Co., New York, N. Y.	Manheim, Geo. H. Danner & Co., -----
P. 1166	Morris Herrmann & Co., New York, N. Y.	Myerstown, H. S. Davis, -----

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Cts.	
273	54.77	56.00	1.71	2.00	56.68	29.37	30	P. 1239
231	55.35	56.00	1.00	2.00	56.42	29.68	28	P. 1191
234	54.88	57.00	1.42	3.50	56.31	29.43	25	P. 1200
235	54.88	57.00	1.59	3.50	56.43	29.43	25	P. 1201
296	55.35	57.00	1.98	3.50	57.37	29.68	28	P. 1262
236	55.35	56.00	0.98	2.00	56.25	29.68	25	P. 1202
242	55.35	56.00	1.00	2.00	56.25	29.68	25	P. 1208
207	55.70	50.00	1.00	3.50	55.87	29.87	25	P. 1173
178	55.35	56.00	1.00	2.00	56.25	29.65	35	P. 1144
190	55.48	57.00	1.20	3.50	57.56	29.75	30	P. 1156
150	54.83	57.00	1.44	3.50	56.87	29.40	40	P. 1116
294	55.01	56.00	1.34	2.00	56.68	29.50	25	P. 1260
229	55.82	57.00	1.00	3.50	56.99	29.93	25	P. 1195
298	55.01	57.00	1.98	3.50	57.68	29.50	35	P. 1264
-----	55.22	-----	1.33	-----	56.69	29.61	29	-----
139	55.48	50.00	1.50	3.50	57.43	29.75	40	P. 1105
262	54.19	50.00	1.47	3.50	55.73	29.06	35	P. 1223
218	54.77	-----	1.72	-----	56.75	29.37	30	P. 1184
211	53.73	50.00	1.00	3.50	54.86	28.81	25	P. 1177
253	54.77	50.00	1.00	3.50	55.73	29.37	30	P. 1219
63	54.60	50.00	1.82	3.50	56.82	29.28	27	P. 963
-----	54.59	-----	1.47	-----	56.23	29.27	31	-----
13	54.66	-----	1.30	-----	56.14	29.31	30	P. 913
213	55.95	50.00	0.85	3.50	56.75	30.00	25	P. 1179
50	55.70	50.00	1.00	3.50	56.87	29.87	30	P. 950
78	55.48	50.00	1.00	3.50	56.53	29.75	40	P. 1044
272	55.70	50.00	0.85	3.50	56.35	29.87	30	P. 1238
239	55.48	-----	1.00	-----	56.55	29.75	25	P. 1205
243	55.59	50.00	1.00	3.50	56.75	29.81	25	P. 1209
311	56.17	50.00	1.20	3.50	57.88	30.12	25	P. 1277
60	56.17	50.00	1.00	3.50	56.55	30.12	25	P. 900
289	55.35	50.00	1.00	3.50	56.35	29.68	25	P. 1255
200	54.77	50.00	1.50	3.50	56.50	29.37	30	P. 1166



TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1221	Morris Herrmann & Co., New York, N. Y.	St. Clair, H. B. Davis, .....
P. 1213	Morris Herrmann & Co., New York, N. Y.	Schuylkill Haven, W. J. Downs, .....
P. 1081	Morris Herrmann & Co., New York, N. Y.	Cambridge Springs, J. W. Drake, .....
P. 1152	Morris Herrmann & Co., New York, N. Y.	Palmira, S. F. Engle, .....
P. 1243	Morris Herrmann & Co., New York, N. Y.	Elizabethtown, Geo. A. Fisher, .....
P. 903	Morris Herrmann & Co., New York, N. Y.	Manchester, S. R. Flurer, .....
P. 1261	Morris Herrmann & Co., New York, N. Y.	Adamstown, Chas. H. Gehman & Co., .....
P. 947	Morris Herrmann & Co., New York, N. Y.	Felton, C. T. Grove, .....
P. 1204	Morris Herrmann & Co., New York, N. Y.	Wernersville, E. S. Hassler, .....
P. 1056	Morris Herrmann & Co., New York, N. Y.	Du Bois, C. L. Hay, .....
P. 1263	Morris Herrmann & Co., New York, N. Y.	Adamstown, S. K. Heffley, .....
P. 929	Morris Herrmann & Co., New York, N. Y.	Wrightsville, Heppenstall Bros. & Co., .....
P. 1206	Morris Herrmann & Co., New York, N. Y.	Sinking Springs, C. B. Hull, .....
P. 1047	Morris Herrmann & Co., New York, N. Y.	Phillipsburg, Jones & Co., .....
P. 1189	Morris Herrmann & Co., New York, N. Y.	Kutztown, C. W. Keiter, .....
P. 962	Morris Herrmann & Co., New York, N. Y.	Lenni Mills, C. L. La Shelle, .....
P. 1183	Morris Herrmann & Co., New York, N. Y.	Boyertown, E. & J. W. Leaver, .....
P. 1180	Morris Herrmann & Co., New York, N. Y.	Boyertown, Irene Mayer, .....
P. 1194	Morris Herrmann & Co., New York, N. Y.	Birdsboro, Miller Bros., .....
P. 1245	Morris Herrmann & Co., New York, N. Y.	Laneaster, Miller Drug Co., .....
P. 1299	Morris Herrmann & Co., New York, N. Y.	Leola, P. H. Meckley, .....
P. 1199	Morris Herrmann & Co., New York, N. Y.	Womelsdorf, W. M. S. Moore, .....
P. 1098	Morris Herrmann & Co., New York, N. Y.	Bellefonte, C. M. Parrish, .....
P. 1211	Morris Herrmann & Co., New York, N. Y.	Pottsville, The Pottsville Supply Co., .....
P. 1296	Morris Herrmann & Co., New York, N. Y.	Terre Hill, Wm. R. Redcay, .....
P. 1292	Morris Herrmann & Co., New York, N. Y.	Strasburg, J. M. Rowe, .....
P. 1187	Morris Herrmann & Co., New York, N. Y.	Kutztown, E. J. Sellers, .....
P. 1282	Morris Herrmann & Co., New York, N. Y.	Gap, Geo. T. Sellers, .....
P. 934	Morris Herrmann & Co., New York, N. Y.	Seven Valleys, H. L. Shlve, .....
P. 1192	Morris Herrmann & Co., New York, N. Y.	Birdsboro, John W. Slipp, .....
P. 910	Morris Herrmann & Co., New York, N. Y.	Dover, C. W. Spangler, .....
P. 1250	Morris Herrmann & Co., New York, N. Y.	Laneaster, Steinman Hardware Co., .....
P. 911	Morris Herrmann & Co., New York, N. Y.	New Freedom, H. A. Stover, .....

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
255	Per ct. 55.01	Per ct. 50.00	Per ct. 0.85	Per ct. 3.50	Per ct. 55.85	Per ct. 29.50	Cts. 30	P. 1221
247	55.95	50.00	1.00	3.50	56.69	30.00	35	P. 1213
115	56.22	50.00	1.00	3.50	57.36	30.15	35	P. 1081
186	55.59	50.00	1.00	3.50	56.68	29.81	25	P. 1152
277	56.41	50.00	0.85	3.50	56.93	30.25	30	P. 1243
3	55.65	50.00	1.00	3.50	56.48	29.84	35	P. 903
295	55.70	50.00	1.00	3.50	57.12	29.87	25	P. 1261
47	56.11	50.00	1.00	3.50	56.81	30.09	30	P. 947
238	55.48	50.00	0.85	3.50	56.25	29.75	25	P. 1204
90	55.59	50.00	1.10	3.50	56.76	29.81	35	P. 1056
297	54.19	50.00	1.98	3.50	57.68	29.06	28	P. 1263
29	55.24	50.00	1.00	3.50	55.96	29.62	40	P. 929
240	55.59	50.00	1.00	3.50	56.43	29.81	25	P. 1206
81	55.24	50.00	1.34	3.50	56.77	29.62	40	P. 1047
223	56.28	50.00	1.20	3.50	57.65	30.18	25	P. 1189
62	55.48	50.00	1.00	3.50	56.55	29.75	30	P. 962
217	55.50	50.00	1.00	3.50	56.75	29.81	25	P. 1183
214	55.82	-----	1.00	-----	56.69	29.93	35	P. 1150
228	55.82	50.00	1.00	3.50	56.87	29.93	28	P. 1194
279	56.52	50.00	0.98	3.50	57.31	30.31	35	P. 1245
333	54.88	50.00	1.00	3.50	55.93	29.43	30	P. 1209
233	55.01	50.00	1.42	3.50	56.69	29.50	25	P. 1199
132	56.11	50.00	1.00	3.50	57.12	30.09	40	P. 1098
245	55.65	50.00	1.00	3.50	56.87	29.84	35	P. 1211
330	54.95	50.00	1.00	3.50	55.92	29.46	30	P. 1296
326	55.59	50.00	0.98	3.50	55.48	29.81	25	P. 1292
221	55.01	50.00	1.42	3.50	56.99	29.50	30	P. 1187
316	55.35	50.00	1.00	3.50	56.11	29.68	28	P. 1282
34	56.06	50.00	1.00	3.50	57.13	30.06	30	P. 934
226	54.08	50.00	2.20	3.50	57.17	29.00	30	P. 1192
10	55.81	50.00	1.00	3.50	56.81	29.93	30	P. 910
284	56.17	50.00	0.85	3.50	56.99	30.12	25	P. 1250
11	55.95	50.00	1.00	3.50	56.94	30.00	30	P. 911

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 941	Morris Herrmann & Co., New York, N. Y.	Columbia, C. R. Strickler, .....
P. 1212	Morris Herrmann & Co., New York, N. Y.	Pottsville, Swahn Hardware Co., .....
P. 1222	Morris Herrmann & Co., New York, N. Y.	St. Clair, G. B. Wagner, .....
P. 1172	Morris Herrmann & Co., New York, N. Y.	Reading, J. H. Weber, .....
P. 1052	Morris Herrmann & Co., New York, N. Y.	Clearfield, W. L. Wilson, .....
P. 936	Morris Herrmann & Co., New York, N. Y.	Goldsboro, E. L. Yinger, .....
P. 922	Morris Herrmann & Co., New York, N. Y.	Dallastown, M. L. Zeigler, .....
		Average, .....
P. 946	Lancaster Drug Co., Lancaster, Pa.,	Mountville, T. S. Shookers, .....
P. 1094	Fred. L. Lavanburg, New York, N. Y.	Corry, C. O. Babbitt & Son, .....
P. 1148	Fred. L. Lavanburg, New York, N. Y.	Mifflintown, L. Banks & Co., .....
P. 1006	Fred. L. Lavanburg, New York, N. Y.	Mount Pleasant, H. F. Barkley, .....
P. 957	Fred. L. Lavanburg, New York, N. Y.	Swarthmore, W. S. Bittle, .....
P. 1039	Fred. L. Lavanburg, New York, N. Y.	Tyrone, Guido C. Boecking, .....
P. 1045	Fred. L. Lavanburg, New York, N. Y.	Bellwood, Boecking & Meredith, .....
P. 1119	Fred. L. Lavanburg, New York, N. Y.	Johnsonburg, Harry E. Bosler, .....
P. 1032	Fred. L. Lavanburg, New York, N. Y.	Leechburg, M. Brechbill, .....
P. 1034	Fred. L. Lavanburg, New York, N. Y.	Leechburg, W. M. Buchholz, .....
P. 1113	Fred. L. Lavanburg, New York, N. Y.	St. Marys, Central Drug Co., .....
P. 1008	Fred. L. Lavanburg, New York, N. Y.	Mount Pleasant, C. F. Coldsmith, .....
P. 1014	Fred. L. Lavanburg, New York, N. Y.	Indiana, Daugherty Bros., .....
P. 977	Fred. L. Lavanburg, New York, N. Y.	Grove City, G. W. De France, .....
P. 1240	Fred. L. Lavanburg, New York, N. Y.	Elizabethtown, Chas. B. Dierolf, .....
P. 973	Fred. L. Lavanburg, New York, N. Y.	Clarion, Ditz & Mooney Hardware Co., .....
P. 1143	Fred. L. Lavanburg, New York, N. Y.	Lewistown, E. S. Eby, .....
P. 1109	Fred. L. Lavanburg, New York, N. Y.	Emporium, Emporium Drug Co., .....
P. 1153	Fred. L. Lavanburg, New York, N. Y.	Palmyra, S. F. Engle, .....
P. 1252	Fred. L. Lavanburg, New York, N. Y.	Manheim, S. Chas. Ensminger, .....
P. 1011	Fred. L. Lavanburg, New York, N. Y.	Scottsdale, J. C. Evans, .....
P. 1100	Fred. L. Lavanburg, New York, N. Y.	Bellefonte, Green's Pharmacy, .....
P. 1272	Fred. L. Lavanburg, New York, N. Y.	New Holland, A. B. Groff, .....
P. 1149	Fred. L. Lavanburg, New York, N. Y.	Mifflintown, E. M. Guss & Sons, .....
P. 1232	Fred. L. Lavanburg, New York, N. Y.	Bedford, F. W. Jordan, .....
P. 1225	Fred. L. Lavanburg, New York, N. Y.	Altoona, Kantner's Drug Store, .....
P. 1311	Fred. L. Lavanburg, New York, N. Y.	Mars, P. L. Kerr & Son, .....
P. 1167	Fred. L. Lavanburg, New York, N. Y.	Myerstown, W. C. Kline, .....
P. 1099	Fred. L. Lavanburg, New York, N. Y.	Bellefonte, Sidney Krumrine, .....
P. 1293	Fred. L. Lavanburg, New York, N. Y.	Strasburg, J. H. Long, .....
P. 1023	Fred. L. Lavanburg, New York, N. Y.	Saltsburg, Joe A. McClaran, .....
P. 1063	Fred. L. Lavanburg, New York, N. Y.	Ford City, McClelland Bros., .....
P. 1516	Fred. L. Lavanburg, New York, N. Y.	New Kensington, McCulloch Drug Co., .....
P. 1280	Fred. L. Lavanburg, New York, N. Y.	Gap, J. C. Marsh, .....
P. 1101	Fred. L. Lavanburg, New York, N. Y.	Lock Haven, Geo. W. Mason, .....
P. 1161	Fred. L. Lavanburg, New York, N. Y.	Lebanon, W. B. Means, .....
P. 1289	Fred. L. Lavanburg, New York, N. Y.	Strasburg, J. J. Messner, .....
P. 993	Fred. L. Lavanburg, New York, N. Y.	Greensburg, D. A. Miller, .....
P. 1019	Fred. L. Lavanburg, New York, N. Y.	Indiana, Clark Neal, .....
P. 1287	Fred. L. Lavanburg, New York, N. Y.	Mount Joy, H. S. Newcomer, .....
P. 1126	Fred. L. Lavanburg, New York, N. Y.	Warren, Newell & Gaughn, .....
P. 1150	Fred. L. Lavanburg, New York, N. Y.	Palmyra, A. C. Ober, .....
P. 1031	Fred. L. Lavanburg, New York, N. Y.	Leechburg, John H. Parks, .....
P. 1229	Fred. L. Lavanburg, New York, N. Y.	Altoona, Philadelphia Medicine Co., .....
P. 967	Fred. L. Lavanburg, New York, N. Y.	Butler, Purvis Pharmacy, .....
P. 1133	Fred. L. Lavanburg, New York, N. Y.	Bradford, J. L. Radebaugh, .....
P. 1242	Fred. L. Lavanburg, New York, N. Y.	Elizabethtown, Jos. H. Rider & Son, .....
P. 1114	Fred. L. Lavanburg, New York, N. Y.	Ridgway, Ross Drug Co., .....
P. 1256	Fred. L. Lavanburg, New York, N. Y.	Manheim, H. F. Ruhl, .....
P. 1175	Fred. L. Lavanburg, New York, N. Y.	Hamburg, Chas. C. Schomo, .....



## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
41	Per ct. 55.35	Per ct. 50.00	Per ct. 1.00	Per ct. 3.50	Per ct. 56.48	Per ct. 29.03	Cts. 35	P. 941
246	55.82	-----	1.00	-----	56.75	29.93	25	P. 1212
256	53.61	50.00	1.59	3.50	55.73	28.75	40	P. 1222
206	54.55	50.00	1.13	3.50	55.87	29.25	35	P. 1172
86	55.40	50.00	1.34	3.50	56.84	29.71	40	P. 1052
36	55.81	50.00	1.00	3.50	56.96	29.93	30	P. 936
22	55.48	50.00	1.00	3.50	56.48	29.75	30	P. 922
-----	55.53	-----	1.09	-----	56.67	29.78	30	-----
46	49.47	-----	3.45	-----	55.56	26.58	40	P. 946
128	55.53	-----	1.34	-----	57.00	29.78	50	P. 1094
182	55.48	50.00	1.00	3.50	56.43	29.75	30	P. 1143
40	55.48	50.00	1.48	3.50	57.44	29.75	50	P. 1003
57	53.44	56.00	2.66	2.50	56.55	28.65	30	P. 957
73	54.77	-----	1.83	-----	56.77	29.37	40	P. 1089
79	55.95	-----	1.00	-----	56.96	30.00	40	P. 1045
158	54.60	50.00	1.68	3.50	57.68	29.28	40	P. 1119
66	53.48	-----	2.21	-----	57.33	28.68	35	P. 1032
68	54.42	50.00	1.47	3.50	58.43	29.18	40	P. 1034
147	55.53	50.00	1.44	3.50	57.90	29.78	50	P. 1113
42	55.12	50.00	1.24	3.50	56.77	29.56	50	P. 1008
43	53.35	-----	1.72	-----	57.63	29.68	40	P. 1014
11	55.70	50.00	1.18	3.50	57.48	29.37	40	P. 977
274	54.55	50.00	1.31	3.50	57.18	29.25	35	P. 1240
7	55.59	-----	1.10	-----	56.81	29.31	35	P. 973
177	54.88	-----	1.41	-----	56.56	29.43	40	P. 1143
143	55.35	50.00	1.89	3.50	57.50	29.68	50	P. 1109
187	54.30	50.00	1.62	3.50	56.56	29.12	25	P. 1153
286	55.35	50.00	1.20	3.50	58.12	29.68	30	P. 1252
45	55.24	50.00	1.00	3.50	56.32	29.62	35	P. 1011
134	55.40	-----	1.20	-----	56.58	29.71	40	P. 1100
306	55.01	50.00	1.83	3.50	57.20	29.50	30	P. 1272
183	55.48	50.00	1.00	3.50	56.56	29.75	30	P. 1149
266	54.19	50.00	1.59	3.50	55.98	29.06	40	P. 1232
259	53.73	50.00	1.47	3.50	55.61	28.81	25	P. 1225
345	54.66	50.00	1.34	3.50	56.05	29.30	30	P. 1311
201	54.77	50.00	1.00	3.50	55.75	29.37	21	P. 1167
133	55.48	50.00	1.44	3.50	57.48	29.75	35	P. 1099
327	54.95	50.00	1.20	3.50	56.29	29.46	25	P. 1293
57	55.35	-----	1.00	-----	56.28	29.68	35	P. 1023
97	54.19	50.00	2.45	3.50	51.60	29.06	40	P. 1063
350	55.24	50.00	1.59	3.50	57.21	29.62	50	P. 1316
314	54.42	50.00	1.59	3.50	56.11	29.18	28	P. 1280
135	55.07	50.00	1.32	3.50	57.06	29.53	40	P. 1101
195	53.73	-----	1.87	-----	56.50	28.81	-----	P. 1161
323	55.35	50.00	1.00	3.50	56.29	29.68	25	P. 1280
27	55.95	50.00	1.20	3.50	57.42	30.00	50	P. 993
53	55.95	-----	1.09	-----	56.90	30.00	35	P. 1019
321	54.19	50.00	2.20	3.50	58.37	29.06	35	P. 1287
160	54.19	50.00	1.87	3.50	57.73	29.06	30	P. 1126
184	55.35	50.00	1.37	3.50	56.75	29.68	39	P. 1159
65	53.02	-----	1.96	-----	57.21	28.43	50	P. 1031
263	54.66	-----	1.00	-----	55.85	29.31	35	P. 1229
1	55.35	50.00	2.00	3.50	57.30	29.68	40	P. 967
172	54.77	50.00	1.75	3.50	57.50	29.37	30	P. 1138
276	55.95	50.00	1.20	3.50	57.43	30.00	30	P. 1242
148	54.35	50.00	1.32	3.50	59.70	29.14	40	P. 1114
290	55.24	50.00	1.20	3.50	56.96	29.62	23	P. 1256
209	53.61	50.00	1.59	3.50	57.65	28.75	25	P. 1175

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 915	Fred. L. Lavanburg, New York, N. Y.	Glen Roek, J. E. Seitz, .....
P. 955	Fred. L. Lavanburg, New York, N. Y.	Swarthmore, Charles A. Smith, .....
P. 1038	Fred. L. Lavanburg, New York, N. Y.	Tyrone, C. A. Steel, .....
P. 990	Fred. L. Lavanburg, New York, N. Y.	Greensburg, Stephenson Chemical Co., .....
P. 996	Fred. L. Lavanburg, New York, N. Y.	Greensburg, Harry Thomas, .....
P. 1028	Fred. L. Lavanburg, New York, N. Y.	Apollo, Frank T. Wray, .....
P. 932	Fred. L. Lavanburg, New York, N. Y.	Hellam, Zerfoss & Leifhart, .....
		Average, .....
P. 1093	Leggett & Bro., New York, N. Y.,...	Corry, N. F. Ames & Co., .....
P. 1096	Leggett & Bro., New York, N. Y.,...	Corry, Thomas Downly, .....
P. 1136	Leggett & Bro., New York, N. Y.,...	Bradford, W. D. Hart, .....
P. 1249	Leggett & Bro., New York, N. Y.,...	Lancaster, J. C. Houghton & Son, .....
P. 1160	Leggett & Bro., New York, N. Y.,...	Lebanon, Lemberger & Co., .....
P. 1134	Leggett & Bro., New York, N. Y.,...	Bradford, W. O. Neely, .....
P. 1088	Leggett & Bro., New York, N. Y.,...	Erie, B. A. Smith, .....
P. 1084	Leggett & Bro., New York, N. Y.,...	Edinboro, Thos. Steadman, .....
P. 1142	Leggett & Bro., New York, N. Y.,...	Port Allegany, Studholme Bros., .....
P. 1087	Leggett & Bro., New York, N. Y.,...	North East, Whitehill & Co., .....
		Average, .....
P. 1217	Lehn & Fink, New York, N. Y.,...	Minersville, Chas. J. Klitsch, .....
P. 1176	Lehn & Fink, New York, N. Y.,...	Hamburg, Chas. C. Schomo, .....
P. 997	Lehn & Fink, New York, N. Y.,...	Greensburg, Harry Thomas, .....
		Average, .....
P. 912	John Lucas & Co., Philadelphia, Pa.,	New Freedom, J. D. Bailey, .....
P. 1258	John Lucas & Co., Philadelphia, Pa.,	Litiz, A. R. Bomberger, .....
P. 1286	John Lucas & Co., Philadelphia, Pa.,	Mount Joy, John H. Buohl, .....
P. 909	John Lucas & Co., Philadelphia, Pa.,	Dover, G. H. Daron, .....
P. 1207	John Lucas & Co., Philadelphia, Pa.,	Sinking Springs, C. W. Freeman, .....
P. 933	John Lucas & Co., Philadelphia, Pa.,	Hellam, Gable & Gilbert, .....
P. 1203	John Lucas & Co., Philadelphia, Pa.,	Wernersville, E. S. Hassler, .....
P. 1102	John Lucas & Co., Philadelphia, Pa.,	Lock Haven, Hilton & Heffner, .....
P. 1168	John Lucas & Co., Philadelphia, Pa.,	Reading, Hoff & Bro., .....
P. 1164	John Lucas & Co., Philadelphia, Pa.,	Lebanon, Lebanon Hardware Co., .....
P. 917	John Lucas & Co., Philadelphia, Pa.,	Dallastown, Edward Leifhart, .....
P. 1125	John Lucas & Co., Philadelphia, Pa.,	Kane, J. D. Magowan, .....
P. 1274	John Lucas & Co., Philadelphia, Pa.,	New Holland, Eli M. Martin, .....
P. 1288	John Lucas & Co., Philadelphia, Pa.,	Mount Joy, H. S. Newcomer, .....
P. 1104	John Lucas & Co., Philadelphia, Pa.,	Lock Haven, Dr. A. Prieson Co., .....
P. 1283	John Lucas & Co., Philadelphia, Pa.,	Gap, Harry A. Raum, .....
P. 1155	John Lucas & Co., Philadelphia, Pa.,	Annvile, U. S. Seabold, .....
P. 918	John Lucas & Co., Philadelphia, Pa.,	Dallastown, V. M. Simon, .....
P. 1266	John Lucas & Co., Philadelphia, Pa.,	Ephrata, I. G. Sprecher's Sons, .....
P. 907	John Lucas & Co., Philadelphia, Pa.,	Dover, Amos Swartz, .....
P. 935	John Lucas & Co., Philadelphia, Pa.,	Goldsboro, E. L. Yinger, .....
P. 923	John Lucas & Co., Philadelphia, Pa.,	Dallastown, M. L. Ziegler, .....
		Average, .....
P. 1178	I. Pfeiffer, New York, N. Y.,.....	Hamburg, W. S. Adams, .....
P. 988	I. Pfeiffer, New York, N. Y.,.....	Freeport, Beynard, Way Co., .....
P. 1033	I. Pfeiffer, New York, N. Y.,.....	Leechburg, M. Brechbill, .....
P. 991	I. Pfeiffer, New York, N. Y.,.....	Greensburg, S. B. Brown, .....
P. 1035	I. Pfeiffer, New York, N. Y.,.....	Leechburg, W. M. Buchholz, .....
P. 975	I. Pfeiffer, New York, N. Y.,.....	Clarion, J. C. Campbell, .....
P. 1075	I. Pfeiffer, New York, N. Y.,.....	Franklin, G. H. Curtis, .....
P. 1015	I. Pfeiffer, New York, N. Y.,.....	Indiana, Daugherty Bros., .....
P. 1067	I. Pfeiffer, New York, N. Y.,.....	Kittanning, H. S. Dershimer, .....
P. 1111	I. Pfeiffer, New York, N. Y.,.....	Emporium, R. C. Dodson, .....
P. 1077	I. Pfeiffer, New York, N. Y.,.....	Meadville, F. K. Easterwood, .....
P. 1060	I. Pfeiffer, New York, N. Y.,.....	Punxsutawney, C. M. Feicht, .....
P. 1036	I. Pfeiffer, New York, N. Y.,.....	Vandergrift, H. L. Ferree, .....

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
15	Per ct. 55.24	Per ct. 50.00	Per ct. 1.82	Per ct. 3.50	Per ct. 57.33	Per ct. 29.62	Cts. 30	P. 915
55	54.14	50.00	1.43	3.50	56.87	29.03	25	P. 955
72	54.31	-----	1.59	-----	56.84	29.12	30	P. 1038
24	55.65	50.00	1.72	3.50	57.48	29.84	50	P. 990
30	55.76	50.00	1.00	3.50	56.81	29.90	40	P. 996
62	55.48	50.00	1.83	3.50	57.57	29.75	50	P. 1028
32	56.17	-----	1.00	-----	57.13	30.12	30	P. 982
-----	54.94	-----	1.48	-----	56.93	29.46	36	-----
127	55.40	50.00	1.00	3.50	56.52	29.71	40	P. 1033
130	55.40	50.00	1.00	3.50	56.76	29.71	40	P. 1096
170	54.77	50.00	1.75	3.50	56.68	29.37	35	P. 1136
283	49.89	-----	1.96	-----	60.70	26.75	30	P. 1249
194	54.66	50.00	1.75	3.50	56.87	29.31	36	P. 1160
168	55.59	-----	1.20	-----	56.81	29.81	40	P. 1134
122	54.83	-----	3.10	-----	60.60	29.40	35	P. 1088
118	54.30	-----	1.83	-----	56.10	29.12	35	P. 1084
176	53.37	-----	1.20	-----	56.25	28.62	35	P. 1142
121	54.88	50.00	1.47	3.50	56.52	29.43	35	P. 1087
-----	54.31	-----	1.63	-----	57.38	29.12	36	-----
251	53.61	50.00	1.47	3.50	55.73	28.75	70	P. 1217
210	54.77	50.00	1.00	3.50	55.87	29.37	25	P. 1176
31	55.59	50.00	1.00	3.50	56.62	29.81	50	P. 997
-----	54.66	-----	1.16	-----	56.07	29.31	48	-----
12	55.48	56.00	1.00	3.50	46.48	29.75	30	P. 912
292	55.35	50.00	1.26	3.50	56.75	29.63	30	P. 1258
320	54.19	50.00	1.71	3.50	56.23	29.06	35	P. 1286
9	55.12	56.00	1.00	3.50	56.03	29.56	30	P. 909
241	53.61	50.00	1.59	3.50	55.62	28.75	25	P. 1207
33	55.07	56.00	1.00	3.50	56.26	29.53	35	P. 933
237	55.01	50.00	0.98	3.50	56.43	29.50	25	P. 1203
136	53.95	56.00	1.20	3.50	56.88	28.93	40	P. 1102
202	54.19	50.00	1.20	3.50	55.75	29.06	25	P. 1168
198	55.12	50.00	1.20	3.50	56.43	29.56	25	P. 1164
17	54.19	56.00	1.00	3.50	55.44	29.06	30	P. 917
159	55.70	-----	2.00	-----	57.50	29.87	40	P. 1125
308	55.35	-----	2.13	-----	57.57	29.68	30	P. 1274
322	54.95	50.00	1.71	3.50	56.90	29.46	35	P. 1283
138	53.84	56.00	1.92	3.50	57.22	28.87	40	P. 1104
317	55.12	50.00	1.00	3.50	56.29	29.56	40	P. 1283
189	56.17	50.00	1.20	3.50	58.43	30.12	35	P. 1155
18	55.48	56.00	1.00	3.50	56.26	29.75	30	P. 918
300	53.61	50.00	1.71	3.50	55.37	28.75	35	P. 1266
7	55.87	56.00	1.00	3.50	57.00	29.96	30	P. 907
35	54.30	56.00	1.00	3.50	55.63	29.12	30	P. 935
23	54.83	56.00	1.00	3.50	56.03	29.43	30	P. 923
-----	54.84	-----	1.31	-----	56.48	29.41	32	-----
212	54.77	-----	0.98	-----	55.37	29.37	25	P. 1178
22	55.40	50.00	1.00	3.50	56.43	29.71	35	P. 983
67	54.77	50.00	2.45	3.50	56.22	29.37	35	P. 1033
25	55.40	50.00	1.00	3.50	56.43	29.71	50	P. 991
69	54.19	50.00	2.21	3.50	56.65	29.06	40	P. 1035
9	55.53	50.00	1.20	3.50	56.87	29.78	30	P. 975
106	55.24	50.00	1.00	3.50	56.40	29.62	50	P. 1075
49	55.59	50.00	1.10	3.50	56.90	29.81	40	P. 1015
101	55.24	-----	1.00	-----	56.22	29.62	50	P. 1067
145	54.30	50.00	1.80	3.50	56.64	29.12	50	P. 1111
111	55.24	50.00	1.34	3.50	56.82	29.62	35	P. 1077
94	54.94	50.00	1.47	3.50	56.34	29.46	30	P. 1060
70	55.53	50.00	1.00	3.50	56.47	29.78	30	P. 1036

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 998	I. Pfeiffer, New York, N. Y.,	Irwin, Geo. W. Fink,
P. 1000	I. Pfeiffer, New York, N. Y.,	Irwin, Fisher & Forker,
P. 1275	I. Pfeiffer, New York, N. Y.,	Atglen, Futhy & Swisher,
P. 1005	I. Pfeiffer, New York, N. Y.,	Jeannette, F. A. Galer,
P. 1070	I. Pfeiffer, New York, N. Y.,	Emleuton, R. R. Gilmore,
P. 1072	I. Pfeiffer, New York, N. Y.,	Emleuton, Gosser Drug Co.,
P. 1306	I. Pfeiffer, New York, N. Y.,	Brookville, Henderson & Craig,
P. 966	I. Pfeiffer, New York, N. Y.,	West Chester, E. M. Hoops,
P. 1032	I. Pfeiffer, New York, N. Y.,	Jeannette, R. T. Hugus,
P. 970	I. Pfeiffer, New York, N. Y.,	Butler, R. M. Logan,
P. 995	I. Pfeiffer, New York, N. Y.,	Greensburg, A. E. Martin,
P. 983	I. Pfeiffer, New York, N. Y.,	Greenville, Roy McCartauey,
P. 1064	I. Pfeiffer, New York, N. Y.,	Ford City, McClelland Bros.,
P. 1305	I. Pfeiffer, New York, N. Y.,	Brookville, McKnight Son & Co.,
P. 1049	I. Pfeiffer, New York, N. Y.,	Phillipsburg, W. M. Mellick,
P. 1246	I. Pfeiffer, New York, N. Y.,	Laucaster, Miller Drug Co.,
P. 1037	I. Pfeiffer, New York, N. Y.,	Vandergrift, T. W. Murphy,
P. 1025	I. Pfeiffer, New York, N. Y.,	Apollo, W. F. Pauly,
P. 971	I. Pfeiffer, New York, N. Y.,	Butler, Rediek & Grohman,
P. 969	I. Pfeiffer, New York, N. Y.,	Butler, R. E. Reed,
P. 1314	I. Pfeiffer, New York, N. Y.,	New Kensington, D. A. Reeser,
P. 1188	I. Pfeiffer, New York, N. Y.,	Kutztown, E. J. Sellers,
P. 1118	I. Pfeiffer, New York, N. Y.,	Johnsonburg, V. R. Smith,
P. 964	I. Pfeiffer, New York, N. Y.,	Media, Henry C. Snowden, Jr.,
P. 939	I. Pfeiffer, New York, N. Y.,	Columbia, O. R. Strickler,
P. 1066	I. Pfeiffer, New York, N. Y.,	Kittanning, W. J. Sturgeon,
P. 986	I. Pfeiffer, New York, N. Y.,	Freeport, J. E. Williams,
P. 1053	I. Pfeiffer, New York, N. Y.,	Clearfield, Woodward & Brenner,
P. 942	I. Pfeiffer, New York, N. Y.,	Columbia, H. W. Zeanner,
		Average,
P. 1096	C. T. Reynolds & Co., New York, N. Y.,	Union City, James B. Black,
P. 945	C. T. Reynolds & Co., New York, N. Y.,	Mountville, A. S. Myers,
P. 1171	C. T. Reynolds & Co., New York, N. Y.,	Reading, P. M. Ziegler Co.,
		Average,
P. 1223	Schieffelin & Co., New York, N. Y.,	St. Clair, F. W. Heinbaeh,
P. 985	The Sherwin-Williams Co., Cleveland, Ohio,	Greenville, C. D. Aldenderfer,
P. 1017	The Sherwin-Williams Co., Cleveland, Ohio,	Indiana, Elmer W. Allison,
P. 1174	The Sherwin-Williams Co., Cleveland, Ohio,	Reading, Bard Hardware Co.,
P. 1312	The Sherwin-Williams Co., Cleveland, Ohio,	New Kensington, D. E. Beegle,
P. 1215	The Sherwin-Williams Co., Cleveland, Ohio,	Schuylkill Haven, G. I. Beusinger,
P. 989	The Sherwin-Williams Co., Cleveland, Ohio,	Freeport, Louis N. Berube,
P. 978	The Sherwin-Williams Co., Cleveland, Ohio,	Grove City, A. E. Bligh & Co.,
P. 1227	The Sherwin-Williams Co., Cleveland, Ohio,	Altoona, Boecking & Meredith,
P. 1157	The Sherwin-Williams Co., Cleveland, Ohio,	Lebanon, C. E. Boger,
P. 1185	The Sherwin-Williams Co., Cleveland, Ohio,	Boyertown, J. & H. K. Boyer,
P. 1083	The Sherwin-Williams Co., Cleveland, Ohio,	Edinboro, Brick Drug Store,
P. 1013	The Sherwin-Williams Co., Cleveland, Ohio,	Scottdale, Broadway Drug Co.,
P. 1079	The Sherwin-Williams Co., Cleveland, Ohio,	Meadville, Grant W. Brock,



## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Cts.	
32	55.65	50.00	1.10	3.50	56.81	29.84	40	P. 998
34	55.53	50.00	1.00	3.50	56.68	29.78	35	P. 1000
309	54.88	50.00	1.59	3.50	56.59	29.43	25	P. 1275
39	55.95	50.00	1.00	3.50	56.89	30.00	50	P. 1005
104	55.12	50.00	1.47	3.50	56.76	29.56	45	P. 1070
106	54.88	50.00	1.00	3.50	56.83	29.43	40	P. 1072
340	55.01	50.00	1.00	3.50	56.95	29.50	50	P. 1336
66	55.70	50.00	1.00	3.50	56.81	29.87	35	P. 966
36	54.77	50.00	1.72	3.50	56.68	29.37	40	P. 1002
4	55.48	50.00	1.00	3.50	56.50	29.75	35	P. 970
29	55.48	50.00	1.00	3.50	56.56	29.75	40	P. 995
17	53.67	50.00	2.48	3.50	56.31	28.78	40	P. 983
98	54.94	50.00	1.47	3.50	56.40	29.46	40	P. 1064
339	54.19	50.00	1.34	3.50	55.13	29.06	35	P. 1305
83	54.83	50.00	2.45	3.50	57.39	29.40	40	P. 1049
280	54.55	50.00	1.83	3.50	56.87	29.25	35	P. 1246
71	55.70	50.00	1.00	3.50	56.77	29.87	40	P. 1037
59	55.59	50.00	1.00	3.50	56.65	29.81	40	P. 1025
5	54.77	50.00	1.00	3.50	55.83	29.37	45	P. 971
3	55.35	50.00	1.00	3.50	56.34	29.68	35	P. 969
348	55.12	50.00	1.00	3.50	56.23	29.56	40	P. 1311
222	54.55	50.00	1.59	3.50	56.75	29.25	30	P. 1188
152	54.55	50.00	1.56	3.50	56.50	29.25	50	P. 1118
64	54.66	50.00	1.30	3.50	56.00	29.31	27	P. 964
39	54.86	-----	1.30	-----	55.75	29.15	35	P. 939
100	55.76	-----	1.20	-----	57.00	29.90	40	P. 1006
20	55.18	50.00	1.10	3.50	56.31	29.59	40	P. 986
87	54.19	50.00	1.47	3.50	56.81	29.06	40	P. 1053
42	54.30	-----	1.30	-----	55.64	29.12	35	P. 942
-----	55.02	-----	1.33	-----	56.47	29.50	39	-----
124	50.35	-----	2.52	-----	60.72	27.00	35	P. 1090
45	52.14	-----	2.47	-----	58.67	27.96	35	P. 945
205	55.35	56.00	1.00	2.00	56.25	29.68	30	P. 1171
-----	52.61	-----	2.00	-----	58.55	28.21	33	-----
257	53.61	50.00	0.98	3.50	55.55	28.75	35	P. 1223
19	56.64	50.00	1.00	3.50	56.37	30.37	40	P. 985
51	57.40	50.00	1.00	3.50	56.10	30.78	35	P. 1017
208	55.95	50.00	1.00	3.50	55.62	30.00	25	P. 1174
346	56.17	50.00	1.00	3.50	55.92	30.12	20	P. 1312
249	55.24	50.00	1.00	3.50	55.43	29.62	30	P. 1215
23	56.17	50.00	1.00	3.50	56.62	30.12	50	P. 989
12	57.27	50.00	1.00	3.50	56.43	30.71	40	P. 978
261	53.61	50.00	1.20	3.50	55.00	28.75	30	P. 1227
191	54.08	50.00	2.75	3.50	57.37	29.00	36	P. 1157
219	56.06	50.00	1.00	3.50	55.75	30.06	30	P. 1185
117	55.95	50.00	1.00	3.50	56.88	30.00	40	P. 1083
47	56.06	50.00	1.06	3.50	56.65	30.06	35	P. 1013
113	56.52	50.00	1.00	3.50	56.40	30.31	35	P. 1079

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1068	The Sherwin-Williams Co., Cleveland, Ohio.	Kittanning, Wm. F. Brodhead, .....
P. 1010	The Sherwin-Williams Co., Cleveland, Ohio.	Scottsdale, J. Warren Brooks, .....
P. 980	The Sherwin-Williams Co., Cleveland, Ohio.	Mercer, Carter Bros., .....
P. 1009	The Sherwin-Williams Co., Cleveland, Ohio.	Mount Pleasant, C. F. Coldsmith, .....
P. 1001	The Sherwin-Williams Co., Cleveland, Ohio.	Irwin, Roy T. Cope, .....
P. 994	The Sherwin-Williams Co., Cleveland, Ohio.	Greensburg Copeland & Borlin, .....
P. 1004	The Sherwin-Williams Co., Cleveland, Ohio.	Jeannette, S. C. Daugherty, .....
P. 972	The Sherwin Williams Co., Cleveland, Ohio.	Butler, C. G. Dixon, .....
P. 1078	The Sherwin-Williams Co., Cleveland, Ohio.	Meadville, V. W. Eller, .....
P. 1012	The Sherwin-Williams Co., Cleveland, Ohio.	Scottsdale, J. C. Evans, .....
P. 1123	The Sherwin-Williams Co., Cleveland, Ohio.	Kane, C. W. Evans & Co., .....
P. 976	The Sherwin-Williams Co., Cleveland, Ohio.	Grove City, I. N. Fithian, .....
P. 1091	The Sberwin-Williams Co., Cleveland, Ohio.	Union City, Wm. Gales, .....
P. 979	The Sherwin-Williams Co., Cleveland, Ohio.	Mereer, J. R. Good, .....
P. 1071	The Sherwin-Williams Co., Cleveland, Ohio.	Emlenton, Gosser Drug Co., .....
P. 1030	The Sherwin-Williams Co., Cleveland, Ohio.	Apollo, W. A. Gray, .....
P. 1069	The Sherwin-Williams Co., Cleveland, Ohio.	East Brady, R. J. Greer, .....
P. 1092	The Sherwin-Williams Co., Cleveland, Ohio.	Corry, E. E. Guignon, .....
P. 1220	The Sherwin-Williams Co., Cleveland, Ohio.	St. Clair, H. J. Gwinner, .....
P. 1230	The Sherwin-Williams Co., Cleveland, Ohio.	Bedford, Ed. D. Heckerman, .....
P. 1165	The Sherwin-Williams Co., Cleveland, Ohio.	Myerstown, L. G. Hess, .....
P. 1313	The Sherwin-Williams Co., Cleveland, Ohio.	New Kensington, B. S. Hummell, .....
P. 1139	The Sherwin-Williams Co., Cleveland, Ohio.	Port Allegany, P. G. Kendall, .....
P. 1310	The Sherwin-Williams Co., Cleveland, Ohio.	Mars, P. L. Kerr & Son, .....
P. 1062	The Sherwin-Williams Co., Cleveland, Ohio.	Ford City, Geo. Kettl, .....
P. 1085	The Sherwin-Williams Co., Cleveland, Ohio.	North East, A. S. Knepp, .....
P. 1233	The Sherwin-Williams Co., Cleveland, Ohio.	Hyndmau, M. H. Kramer, .....
P. 961	The Sherwin-Williams Co., Cleveland, Ohio.	Lenni Mills, C. L. La Shelle, .....
P. 1074	The Sherwin-Williams Co., Cleveland, Ohio.	Franklin, Wm. C. Mackey, .....
P. 1295	The Sherwin-Williams Co., Cleveland, Ohio.	Terre Hill, Marks & Moyer, .....
P. 1024	The Sherwin-Williams Co., Cleveland, Ohio.	Saltsburg, Joe A. McClaran, .....
P. 1304	The Sherwin-Williams Co., Cleveland, Ohio.	Brookville, McKnight, Son & Co., .....
P. 1020	The Sherwin-Williams Co., Cleveland, Ohio.	Blairsville, M. G. Miller, .....

## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Ots.	
102	56.64	50.00	1.00	3.50	56.76	30.37	85	P. 1068
44	57.10	50.00	1.00	3.50	56.83	30.62	40	P. 1010
14	56.11	-----	1.00	-----	56.06	30.09	40	P. 980
43	54.77	50.00	2.47	3.50	56.89	29.37	50	P. 1009
85	57.68	50.00	1.00	3.50	56.43	30.93	40	P. 1001
28	57.10	50.00	1.00	3.50	56.19	30.62	50	P. 994
38	56.88	50.00	1.00	3.50	56.59	30.50	35	P. 1004
6	56.64	50.00	1.20	3.50	56.37	30.37	40	P. 972
112	56.52	50.00	1.00	3.50	56.58	30.31	50	P. 1078
46	55.95	50.00	1.00	3.50	56.53	30.00	35	P. 1012
157	55.24	50.00	1.20	3.50	57.37	29.62	30	P. 1123
10	57.27	50.00	0.86	3.50	56.81	30.71	40	P. 976
125	56.22	50.00	1.00	3.50	56.70	30.15	40	P. 1091
13	56.52	50.00	1.00	3.50	56.31	30.31	40	P. 979
105	55.82	50.00	1.00	3.50	57.00	29.93	40	P. 1071
64	56.53	50.00	1.00	3.50	56.96	30.31	40	P. 1030
103	57.11	50.00	1.00	3.50	56.80	30.62	50	P. 1069
126	56.06	50.00	1.00	3.50	56.40	30.06	40	P. 1092
254	54.30	50.00	1.20	3.50	55.61	29.12	35	P. 1220
264	55.12	50.00	1.00	3.50	56.16	29.56	40	P. 1230
199	55.70	50.00	1.20	3.50	56.25	29.87	80	P. 1165
347	56.17	50.00	1.00	3.50	55.92	30.12	40	P. 1313
173	55.35	50.00	1.75	3.50	58.43	29.68	30	P. 1139
344	55.35	50.00	1.00	3.50	56.23	29.68	40	P. 1310
96	55.35	50.00	1.00	3.50	56.10	29.68	50	P. 1062
119	56.52	50.00	1.00	3.50	56.64	30.31	40	P. 1085
267	55.59	50.00	1.00	3.50	55.12	29.81	40	P. 1233
61	54.47	-----	1.43	-----	56.13	29.21	30	P. 961
108	56.17	50.00	1.00	3.50	57.36	30.12	35	P. 1074
329	55.12	50.00	1.00	3.50	56.17	29.56	30	P. 1295
58	55.95	50.00	1.06	3.50	56.47	30.00	35	P. 1024
338	54.55	-----	1.00	-----	55.12	29.25	35	P. 1304
54	56.64	50.00	1.00	3.50	56.22	30.37	85	P. 1020

TABLE I.—ANALYSIS OF SAMPLES OF PARIS

Chief Chemist's Number.	Name and Address of Manufacturer or Importer.	Sampled at
P. 1089	The Sherwin-Williams Co., Cleveland, Ohio.	Erle, Gus J. Miller, .....
P. 1154	The Sherwin-Williams Co., Cleveland, Ohio.	Annville, H. W. Miller, .....
P. 1127	The Sherwin-Williams Co., Cleveland, Ohio.	Warren, J. B. Mullen, .....
P. 1103	The Shewin-Williams Co., Cleveland, Ohio.	Lock Haven, National Medicine Co., .....
P. 1124	The Sherwin-Williams Co., Cleveland, Ohio.	Kane, S. S. Neweomer, .....
P. 1308	The Sherwin-Williams Co., Cleveland, Ohio.	Brookville, John J. Patterson, .....
P. 1059	The Sherwin-Williams Co., Cleveland, Ohio.	Du Bois, J. S. Quinn, .....
P. 1234	The Sherwin-Williams Co., Cleveland, Ohio.	Hyndman, Chas. R. Rhodes, .....
P. 1086	The Sherwin-Williams Co., Cleveland, Ohio.	North East, Salchow & Baldwin, .....
P. 1307	The Sherwin-Williams Co., Cleveland, Ohio.	Brookville, Geo. L. Sandt, .....
P. 1129	The Sherwin-Williams Co., Cleveland, Ohio.	Warren, John Siegfried, .....
P. 1030	The Sherwin-Williams Co., Cleveland, Ohio.	Cambridge Springs, J. B. Torry, .....
P. 1226	The Sherwin Williams Co., Cleveland, Ohio.	Altoona, H. W. Turner, .....
P. 1121	The Sherwin-Williams Co., Cleveland, Ohio.	Kane, E. H. Watkins, .....
P. 1297	The Sherwin-Williams Co., Cleveland, Ohio.	Terre Hill, S. S. Watts, .....
P. 987	The Sherwin-Williams Co., Cleveland, Ohio.	Freeport, J. E. Williams, .....
		Average, .....
P. 901	Smith, Kline & French Co., Philadelphia, Pa.	York Haven, I. M. Anspaeh, .....
P. 1218	Smith, Kline & French Co., Philadelphia, Pa.	Minersville, Geo. L. Brown, .....
P. 1169	Smith, Kline & French Co., Philadelphia, Pa.	Reading, C. S. Lyter, .....
P. 1162	Smith, Kline & French Co., Philadelphia, Pa.	Lebanon, E. R. Mader, .....
		Average, .....
P. 958	H. O. Snowden, Media, Pa., .....	Swarthmore, Dewitt O. Lewis, .....
P. 948	Sonelheim Alsberg & Co., New York, N. Y.	Brogueville, Grove & Uffelman, .....
P. 1196	The Wm. Stahler Drug Co., Norristown, Pa.	Bldrsboro, N. J. Hoffman, .....
P. 1214	L. C. Thompson, Pottsville, Pa., .....	Schuylkill Haven, Sausser Bros., .....
P. 916	Unknown, .....	Glen Rock, T. W. Mather, .....
		Total average, .....

\*No arsenic nor copper detected.

Found Barium Sulphate, Calcium Sulphate, Lead Chromate, and Prussian Blue.



## GREEN COLLECTED IN 1910—Continued.

Agent's Number.	Arsenious Oxide Combined with Copper.		Water-Soluble Arsenious Oxide.		Total arsenious oxide.	Copper oxide.	Price per pound.	Chief Chemist's Number.
	Found.	Guaranteed.	Found.	Guaranteed.				
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Cts.	
123	56.88	50.00	1.00	3.50	56.64	30.50	30	P. 1089
188	56.34	50.00	1.00	3.50	56.56	30.21	30	P. 1154
161	56.17	50.00	1.20	3.50	56.17	30.12	40	P. 1127
137	56.64	50.00	1.44	3.50	58.20	30.37	35	P. 1103
158	56.34	50.00	1.20	3.50	56.87	30.21	40	P. 1124
342	56.64	50.00	1.00	3.50	56.35	30.37	35	P. 1308
93	56.17	50.00	1.00	3.50	56.52	30.12	40	P. 1059
268	56.06	50.00	1.00	3.50	56.16	30.06	35	P. 1234
120	56.64	50.00	1.00	3.50	56.70	30.37	40	P. 1086
341	55.82	50.00	1.00	3.50	56.05	29.93	35	P. 1307
163	56.28	50.00	1.20	3.50	56.75	30.18	40	P. 1129
114	55.40	50.00	1.00	3.50	56.70	29.71	35	P. 1080
260	55.35	50.00	1.20	3.50	55.73	29.68	35	P. 1226
155	56.52	50.00	1.20	3.50	56.93	30.31	35	P. 1121
331	55.35	50.00	1.00	3.50	56.05	29.68	30	P. 1297
21	56.58	50.00	1.00	3.50	56.81	30.24	40	P. 987
-----	56.05	-----	1.11	-----	56.44	30.05	37	-----
1	54.19	53.50	1.69	2.50	56.03	29.06	30	P. 901
252	53.02	-----	1.59	-----	55.61	28.43	35	P. 1218
203	54.66	-----	1.20	-----	55.93	29.31	40	P. 1169
196	54.08	-----	1.92	-----	56.56	29.00	35	P. 1162
-----	53.99	-----	1.60	-----	56.03	28.95	35	-----
58	54.25	-----	1.30	-----	55.76	29.09	35	P. 958
48	56.23	-----	1.00	-----	57.13	30.15	30	P. 948
230	54.66	50.00	1.72	3.50	56.25	29.31	30	P. 1196
248	54.19	-----	1.71	-----	56.04	29.06	28	P. 1214
16	*	-----	*	-----	*	*	30	P. 916
-----	55.10	-----	1.32	-----	56.61	29.55	35	-----

